AQUATIC SCIENCE (Science 112.46)
Correlation to Texas Essential Knowledge and Skills

CHAPTER 1 - INTRODUCTION TO WATER

ACTIVITY	KNOWLEDGE AND SKILLS
Water, Water Everywhere, 1-29	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A) Science concepts (differentiate among freshwater, brackish, and saltwater ecosystems) (B) (research and identify biological...) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change) 112.46.10(A)(B)(C) Science concepts (..knows the origin and use of water in a watershed)
A Global View of the Wet Earth, 1-41	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A) Science concepts (differentiate among freshwater, brackish, and saltwater ecosystems) (B) (research and identify biological...) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change) 112.46.10(A)(B)(C) Science concepts (..knows the origin and use of water in a watershed)
Water Careers, 1-85	112.46.3(D) Scientific processes (describe the connection between aquatic science and future careers)
"pH- The First Clue to Water Quality", 1-109	112.46.1(A)(B) (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A)(B)(C) Science concepts (...knows the components of aquatic ecosystems)
International Water Disputes: You be the Judge, 1-147	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.8(C) Science concepts (identify and describe a local or global issue...) (D) (analyze and discuss human influences...)

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Water, Water Everywhere, 1-29	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A) Science concepts (differentiate among freshwater, brackish, and saltwater ecosystems) (B) (research and identify biological...) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change) 112.46.10(A)(B)(C) Science concepts (..knows the origin and use of water in a watershed)
Uncle Sam Says, "Keep IT Clean!", 1-171	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.8(C) Science concepts (identify and describe a local or global issue...) (D) (analyze and discuss human influences...)
Water Chemistry Checkup, 1-185	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A)(B)(C) Science concepts (...knows the components of aquatic ecosystems)
How Hard is Hard Water?, 1-195	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A)(B)(C) Science concepts (...knows the components of aquatic ecosystems) 112.46.5(D) Science concepts (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.8(A) Science concepts (predict effects of chemical...on the ...components of an aquatic ecosystem) (B) (analyze the cumulative impact of ...human influence on an aquatic system)

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Water, Water Everywhere, 1-29	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A) Science concepts (differentiate among freshwater, brackish, and saltwater ecosystems) (B) (research and identify biological...) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change) 112.46.10(A)(B)(C) Science concepts (..knows the origin and use of water in a watershed)
Is Your Water Well For Drinking?, 1-203	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.5(D) Science concepts (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.8(A) Science concepts (predict effects of chemical...on the ...components of an aquatic ecosystem) (B) (analyze the cumulative impact of ...human influence on an aquatic system)

CHAPTER 2 - DRINKING WATER AND WASTEWATER TREATMENT

ACTIVITY	KNOWLEDGE AND SKILLS
Drinking Water Jeopardy, 2-21	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.5(D) Science concepts (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.8(A) Science concepts (predict effects of chemical...on the...components of an aquatic ecosystem) (B) (analyze the cumulative impact of...human influence on an aquatic system) (D) (analyze and discuss human influences on an aquatic environment...)

ACTIVITY	KNOWLEDGE AND SKILLS
Source Water Protection, Surface Water Sources, 2-33	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.5(D) Science concepts (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.8(A) Science concepts (predict effects of chemical...on the...components of an aquatic ecosystem) (B) (analyze the cumulative impact of...human influence on an aquatic system) (D) (analyze and discuss human influences on an aquatic environment...)
Source Water Protection: Ground Water Sources, 2-43	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.5(D) Science concepts (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.8(A) Science concepts (predict effects of chemical...on the...components of an aquatic ecosystem) (B) (analyze the cumulative impact of...human influence on an aquatic system) (D) (analyze and discuss human influences on an aquatic environment...)
What is in Source Water?, 2-65	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.5(D) Science concepts (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.7(A) Science concepts (classify different aquatic organisms using dichotomous keys) (C) (predict adaptations of an organism...)

CHAPTER 3 - SURFACE WATER RESOURCES

ACTIVITIES	KNOWLEDGE AND SKILLS
Biography of a River, 3-1	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.4(B) Science concepts (research and identify biological,... of an aquatic ecosystem) 112.46.6(B) Science concepts (interpret the role of aquatic systems in climate and weather) 112.46.8(B) Science concepts (analyze the cumulative impact of natural and human influence...) (C) (identify and describe a local...issue affecting an aquatic system) (D) (analyze and discuss human influences on an aquatic environment...) 112.46.10 (A)(B)(C) Science concepts (...knows the origin and use of water in a watershed)
Catch Me If You Can-..., 3-7	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.6(B) Science concepts (interpret the role of aquatic systems in climate and weather) 112.46.9(A)(B)(C) Science concepts (...knows that geological phenomena and fluid dynamics affect aquatic systems.) 112.46.10(B) Science concepts (research and identify the types of uses and volummes of water...)
Help! Lake Overturning!, 3-15	112.46.2(A)(B)(C)(D)(E) Scientific processes(...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.46.5(A) Science concepts (observe and compile data over a period of time...) (C) identify the interdependence of organisms...) (D) (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.8(A) Science concepts (predict effects of chemical...on...components of an aquatic ecosystem)

ACTIVITIES	KNOWLEDGE AND SKILLS
The Aging of Lakes, 3-25	112.46.2(A)(B)(C)(D)(E) Scientific processes(...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) (C) collect and analyze baseline quantitative data...from an aquatic environment) 112.46.5(A) Science concepts (observe and compile data over a period of time...) (C) identify the interdependence of organisms...) (D) (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.8(A) Science concepts (predict effects of chemical...on...components of an aquatic ecosystem)
Biodiversity = Water Quality, 3-29	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.46.5(C) Science concepts (identify the interdependence of organisms...) 112.46.7(A) Science concepts (classify different aquatic organisms using dichotomous keys) 112.46.8(A) predict effects on chemical...on...components of an aquatic ecosystem)
Best Management Practices for Forestry, 3-43	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.46.8(A((B)(C)(D) Science concepts (...knows that aquatic environments change) 112.46.10(A)(B)(C) Science concepts (...knows that the origin and use of water in a watershed)

ACTIVITIES	KNOWLEDGE AND SKILLS
Pollutants: How Much Total or How Much per Unit of Water?, 3-53	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.46.8(B) Science concepts (analyze the cumulative impact of ...human influence on an aquatic system) (C) (identify and describe a local or global issue affecting an aquatic system)
Turbidity, 3-71	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) (C) (collect and analyze baseline quantitative data...from an aquatic environment)
Clean Clothes - Clean Environments? Phosphates, 3-79	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change.)
What Turned the Creek Orange?	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change.)

ACTIVITIES	KNOWLEDGE AND SKILLS
Thermal Pollution, 3-89	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change.)

CHAPTER 4 - GROUNDWATER RESOURCES

ACTIVITY	KNOWLEDGE AND SKILLS
Groundwater Basics, 4-1	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.45.10(A) Science concepts (identify sources and determine the amounts of water in a watershed...) (B) Science concepts (research and identify the types of uses and volume of water...)
From Ground to Water, 4-11	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.45.10(A)(B)(C) Science concepts (...knows the origin and use of water in a watershed.)
What Goes on Down Under?, 4-27	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.45.10(A)(B)(C) Science concepts (...knows the origin and use of water in a watershed.)

ACTIVITY	KNOWLEDGE AND SKILLS
Do You Drink It?, 4-37	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.45.10(A)(B)(C) Science concepts (...knows the origin and use of water in a watershed.)
What is Groundwater Pollution Doing to the Neighborhood?, 4-77	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change)
Landfills and the Potential for Groundwater Contamination, 4-97	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(B) Science concepts (research and identify biological, chemical...components of an aquatic ecosystem) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change)

CHAPTER 5 - WETLANDS AND COASTAL WATERS

ACTIVITY	KNOWLEDGE AND SKILLS
Understanding Marine Resources, 5-15	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.8(B) Science concepts (analyze the cumulative impact of ...human influence on an aquatic system) (D) (analyze and discuss human influences on an aquatic environment...)

ACTIVITY	KNOWLEDGE AND SKILLS
River Input into the Gulf of Mexico, 5-19	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.8(B) Science concepts (analyze the cumulative impact of ...human influence on an aquatic system) (D) (analyze and discuss human influences on an aquatic environment...) 112.48.9(A)(B)(C) Science concepts (...knows that geological phenomena and fluid dynamics affect aquatic systems)
Wetlands, USA-More Than Swamps, 5-25	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A) Science concepts (differentiate among freshwater...) (B) (research and identify biological,...components of an aquatic ecosystem)
Sea Margin Diversity, 5-45	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A) Science concepts (differentiate among freshwater...) (B) (research and identify biological,...components of an aquatic ecosystem) 112.46.5(C) Science concepts (identity the interdependence of organisms...)
Estuaries: Interface Between Sea and Land, 5-53	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A) Science concepts (differentiate among freshwater...) (B) (research and identify biological,...components of an aquatic ecosystem) 112.46.5(C) Science concepts (identity the interdependence of organisms...) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change)

ACTIVITY	KNOWLEDGE AND SKILLS
Erosion Kills the Habitats That Feed You!, 5-59	112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A) Science concepts (differentiate among freshwater...) (B) (research and identify biological,...components of an aquatic ecosystem) 112.46.5(C) Science concepts (identity the interdependence of organisms...) (D) (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change)
Oil Spills, 5-65	112.46.1(A)(B) Scientific processes (...conducts field and laboratory investigations...) 112.46.2(A)(B)(C)(D)(E) Scientific processes (...uses scientific methods...) 112.46.3(C) Scientific processes (...uses critical thinking and scientific problem solving...) 112.46.4(A) Science concepts (differentiate among freshwater...) (B) (research and identify biological,...components of an aquatic ecosystem) 112.46.5(C) Science concepts (identity the interdependence of organisms...) (D) (evaluate trends in data to determine the factors that impact aquatic ecosystems) 112.46.8(A)(B)(C)(D) Science concepts (...knows that aquatic environments change)